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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/312,404	05/14/1999	JOHN MAURICE BIRD	MARSP0114US	2564

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EXAMINER
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TUGBANG, DEXTER A

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 01/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/312,404

Applicant(s)

BIRD ET AL.

Examiner

Dexter Tugbang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 and 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 12-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 5) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 6) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Prosecution Application*

1. The request filed on 10/17/01 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/312,404 is acceptable and a CPA has been established. An action on the CPA follows.

### *Election/Restrictions*

2. Claims 7-11 and 17-20 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 13.

### *Claim Objections*

3. Claims 2-6 and 13-16 are objected to because of the following informalities: The preamble of "A method..." in each of dependent Claims 2-6 and 13-16 is inconsistent with the preamble of independent Claims 1 and 12. The examiner suggests amending each of dependent Claims 2-6 and 13-16 to read as --The method...--, to avoid such inconsistencies. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-6 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, the recitation in the alternative form of "in a flat or substantially flat shape" (line 3) raises uncertainties as to what degree the shape of the former has to be flat. Moreover, it is unclear from the disclosure what is meant by the phrase of "substantially flat shape". Since a latter recitation of "to form a flat shape former" (lines 3-4) positively requires that the former is formed in a flat shape, is the recitation of "in a flat or substantially flat shape" even needed? The same problems above occur in each of Claims 4 and 14 with the same recitation of "flat or substantially flat".

In each of Claims 5, 15 and 16, the recitation of "the step of securing" lacks positive antecedent basis.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 3, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication JP 60-106114, referred to hereinafter as JP'114.

JP'114 discloses a method of manufacturing a coil for an electromagnetic inductor comprising, in sequence: manufacturing a former (integrated sheets 1, 1', 3 shown in Fig. 3) in a

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flat shape (shown in Fig. 1) to form a flat shape (shown in Fig. 3); bending the flat shape former into a curved cylindrical shape around a core 4 to form a curved cylindrical former (shown in Fig. 5); and disposing two hard wire electrical conductors 7, 7' around the curved cylindrical former (shown in Fig. 6), all of which is discussed in the CONSTITUTION.

Regarding Claims 2, 12 and 13, the American Heritage Dictionary (3<sup>rd</sup> edition, 1992) defines the terms of *flexible* as “capable of being bent or flexed” and *resilient* as “capable of returning to an original shape, after having been compressed”. The former (integrated sheets 1, 1', 3) taught by JP'114 is clearly bent or flexed around core 4 and is certainly capable of returning to its original position of being flat. Therefore, the former (integrated sheets 1, 1', 3) of JP'114 can be said to be both *flexible* and *resilient*.

8. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Publication 153,131, referred to hereinafter as EP'131.

EP'131 discloses a method of manufacturing a coil for a magnet comprising: manufacturing a former from a flexible material to form a flexible former 12 (see page 2, lines 13-23); and disposing a hard-wire electrical conductor (coils 10, 11) around the flexible former (shown in Fig. 2). As mentioned in the discussion above as to the definition of the term *resilient*, the former of EP'131 is clearly bent or flexed into a cylindrical shape and is certainly capable of returning to its original position of being flat. Therefore, the flexible former of EP'131 can be said to be *resilient*.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'114 in view of Japanese Patent Publication JP 3-141694, referred to hereinafter as JP'694.

JP'114 discloses the claimed manufacturing method as previously discussed. JP'114 does not teach that the flat former is formed by moulding.

JP'694 teaches the general concept of a multiplayer, flexible former (circuit board 20) being formed by thermal pressure moulding when the former is flat (as shown in Figs. 1-4 and discussed in the CONSTITUTION). Such a pressure molding process improves manufacturing production efficiency and simplifies operating steps (see ABSTRACT).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the flat former of JP'114 by thermal pressure moulding, as taught by JP'694, to advantageously improve manufacturing production efficiency and simplify operating steps.

11. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'114 in view of Horton 3,973,321.

JP'114, as applied to Claims 1 and 2 above, discloses the claimed manufacturing method as previously discussed. JP'114 does not teach a step of securing the former after the step of bending the former. It is noted that the completed structure of JP'114, drawn to an

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electromagnetic inductor, occurs *after* the former (integrated sheet 1, 1', 3) has been bent. Securing the former, after the former has been bent or after the former has been completed, within an electrical circuit or onto a printed circuit board is notoriously well known in the art.

Horton teaches this conventional concept of securing a completed electromagnetic inductor 12 having a cylindrical shaped former (shown in Fig. 2) within an electrical circuit (shown in Fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have secured the former of JP'114 to an electrical circuit, after it has been bent or after the final structure has been completed, for the purpose of forming an electromagnetic circuit having an electromagnetic inductor.

It is noted that further limitations as to how the former is secured may avoid the rejection to JP'114 and Horton.

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'114 in view of JP'694, as applied to Claims 1, 2, 13 and 14 above, and further in view of Horton for the same reasons discussed in paragraph 11 above.

### ***Response to Arguments***

13. Applicant's arguments with respect to Claims 1 and 12 in the Request for Reconsideration (Paper No. 18) have been considered but are moot in view of the new ground(s) of rejection above.

*Allowable Subject Matter*

14. Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter. With respect to Claim 6, the prior art does teach moulding a former including a groove in which a conductor is disposed around the curved former within the groove. This is best exemplified by the reference to Kiekhafer et al (U. S. Patent 4,934,049). Kiekhafer teaches moulding a former 34 having grooves to dispose conductors 12 (see Fig. 3). However, the moulding of the former 34 of Kiekhafer occurs in a cylindrical shape over the lead body 28 and *not when the former is flat* in shape. Claim 6 depends from Claim 4 in which Claim 4 specifically requires the moulding to occur when the former is flat. Since moulding of the former is required to be when the former is flat, the combination of Kiekhafer with the prior art would be hindsight.

*Conclusion*

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

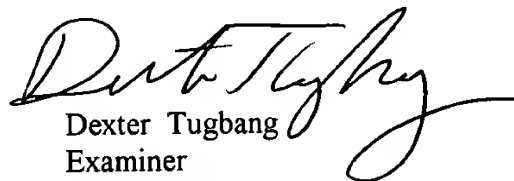
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the



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organization where this application or proceeding is assigned are 703-305-3590 for regular communications and 703-305-3588 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.



Dexter Tugbang  
Examiner  
Art Unit 3729

adt  
December 30, 2001